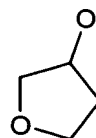
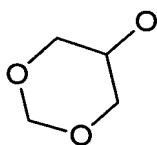


1. (Currently amended) A compound of the formula

$$\begin{array}{c}
 \text{(G)}_x \\
 | \\
 \text{A}-\text{N}-\text{CH}(\text{D})-\text{CH}(\text{OR}^7)-\text{CH}_2-\text{N}(\text{D}')-\text{S}(=\text{O})_2\text{E} \\
 | \\
 \text{D}
 \end{array}
 \quad (\text{I})$$

wherein:

O=C1OC2C(C1)OC3C(C2)OC(C3)O

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~~groups independently selected from hydroxy, C₁-C₄ alkoxy, Ht,~~
~~-O Ht, -NR²-CO-N(R²)₂ or -CO-N(R²)₂, or R⁷,~~

each R¹ is independently selected from -C(O)-,
-S(O)₂-, -C(O)-C(O)-, -O-C(O)-, -O-S(O)₂-, -NR²-, -NR²-S(O)₂-,
-NR²-C(O)- or -NR²-C(O)-C(O)-;

each Ht is independently selected from C₃-C₇
cycloalkyl; C₅-C₇ cycloalkenyl; C₆-C₁₄ aryl; or a 5-7 membered
saturated or unsaturated heterocycle, containing one or more
heteroatoms selected from N, N(R²), O, S and S(O)_n; wherein
said aryl or said heterocycle is optionally fused to Q; and
wherein any member of said Ht is optionally substituted with
one or more substituents independently selected from oxo, -OR²,
SR², -R², -N(R²)(R²), -R²-OH, -CN, -CO₂R², -C(O)-N(R²)₂,
-S(O)₂-N(R²)₂, -N(R²)-C(O)-R², -N(R²)-C(O)O-R², -C(O)-R²,
-S(O)_n-R², -OCF₃, -S(O)_n-Q, methylenedioxy, -N(R²)-S(O)₂(R²),
halo, -CF₃, -NO₂, Q, -OQ, -OR⁷, -SR⁷, -R⁷, -N(R²)(R⁷) or -N(R⁷)₂;

each R² is independently selected from H, or C₁-C₄
alkyl optionally substituted with a 3-7 membered saturated,
partially saturated or unsaturated carbocyclic ring system; or
a 5-7 membered saturated, partially saturated or unsaturated
heterocyclic ring containing one or more heteroatoms selected
from O, N, S, S(O)_n or N(R³³); wherein any of said ring systems
or N(R³³) is optionally substituted with 1 to 4 substituents
independently selected from -X'-Y', -O-arylalkyl,

-S-arylalkyl, -N(Y')₂, -N(H)-arylalkyl, -N(C₁-C₄ alkyl)-arylalkyl, oxo, -O-(C₁-C₄ alkyl), OH, C₁-C₄ alkyl, -SO₂H, -SO₂-(C₁-C₄ alkyl), -SO₂-NH₂, -SO₂-NH(C₁-C₄ alkyl), -SO₂-N(C₁-C₄ alkyl)₂, -NH₂, -NH(C₁-C₄ alkyl), -N(C₁-C₄ alkyl)₂, -NH-C(O)H, -N(C₁-C₄ alkyl)-C(O)H, -NH-C(O)-C₁-C₄ alkyl, -C₁-C₄ alkyl-OH, -OH, -CN, -C(O)OH, -C(O)O-C₁-C₄ alkyl, -C(O)-NH₂, -C(O)-NH(C₁-C₄ alkyl), -C(O)-N(C₁-C₄ alkyl)₂, halo or -CF₃;

X' is -O-, -S-, -NH-, -NHC(O)-, -NHC(O)O-, -NHSO₂-, or -N(C₁-C₄)alkyl-;

Y' is C₁-C₁₅ alkyl, C₂-C₁₅ alkenyl or alkynyl, wherein one to five carbon atoms in Y are optionally substituted with C₃-C₇ cycloalkyl or C₅-C₆ cycloalkenyl, C₆-C₁₄ aryl or a 5-7 membered saturated or unsaturated heterocycle, containing one or more heteroatoms selected from N, NH, O, S and S(O)_n;

each R³ is independently selected from H, Ht, C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, C₃-C₆ cycloalkyl or C₅-C₆ cycloalkenyl; wherein any member of said R³, except H, is optionally substituted with one or more substituents selected from -OR², -C(O)-N(R²)₂, -S(O)_n-N(R²)₂, -N(R²)₂, -N(R²)-C(O)O(R²), -N(R²)-C(O)N(R²)₂, -N(R²)-C(O)-R², Ht, -CN, -SR², -C(O)OR², N(R²)-C(O)-R²;

each R³³ is selected from H, C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, C₃-C₆ cycloalkyl or C₅-C₆ cycloalkenyl, C₆-C₁₄ aryl or a 5-7 membered saturated or unsaturated

heterocycle, containing one or more heteroatoms selected from N, NH, O, S and S(O)_n;

each n is independently 1 or 2;

G, when present, is selected from H, R⁷ or C₁-C₄ alkyl, or, when G is C₁-C₄ alkyl, G and R⁷ are bound to one another either directly or through a C₁-C₃ linker to form a heterocyclic ring; or

when G is not present (i.e., when x in (G)_x is 0), then the nitrogen to which G is attached is bound directly to the R⁷ group in -OR⁷ with the concomitant displacement of one -ZM group from R⁷;

D is selected from C₁-C₆ alkyl which is substituted with Q, which is optionally substituted with one or more groups selected from C₃-C₆ cycloalkyl, -R³, -O-Q or Q; C₂-C₄ alkenyl which is substituted with Q, which is optionally substituted with one or more groups selected from -OR², -S-Ht, -R³, -O-Q or Q; C₃-C₆ cycloalkyl, which is optionally substituted with or fused to Q; or C₅-C₆ cycloalkenyl, which is optionally substituted with or fused to Q;

each Q is independently selected from a 3-7 membered saturated, partially saturated or unsaturated carbocyclic ring system; or a 5-7 membered saturated, partially saturated or unsaturated heterocyclic ring containing one or more heteroatoms selected from O, N, S, S(O)_n or N(R²); wherein Q

contains one substituent selected from $-OR^2$, $-OR^8$,
 $-O$ -arylalkyl, $-SR^8$, $-S$ -arylalkyl, $-N(R^2)R^8$, $-N(R^2)$ -arylalkyl and
may be optionally substituted with one or more additional
substituents independently selected from oxo, $-OR^8$,
 $-O$ -arylalkyl, $-SR^8$, $-S$ -arylalkyl, $-N(R^2)R^8$, $-N(R^2)$ -arylalkyl,
 $-OR^2$, $-R^2$, $-SO_2R^2$, $-SO_2-N(R^2)_2$, $-N(R^2)_2$, $-N(R^2)-C(O)-R^2$, $-OH$,
 $(C_1-C_4)-OH$, $-CN$, $-CO_2R^2$, $-C(O)-N(R^2)_2$, halo or $-CF_3$;

each R^8 is independently selected from Ht, $-C_1-C_{15}$
branched or straight chain alkyl, alkenyl or alkynyl wherein
one to five carbon atoms in said alkyl, alkenyl or alkynyl are
independently replaced by W, or wherein one to five carbon
atoms in said alkyl, alkenyl or alkynyl are substituted with
Ht; and wherein R^8 is additionally and optionally substituted
with one or more groups independently selected from $-OH$, $-S(C_1-$
 C_6 alkyl), $-CN$, $-CF_3$, $-N(R^2)_2$, halo, $-C_1-C_4$ -alkyl, $-C_1-C_4$ -alkoxy;
 $-Ht$; $-O-Ht$; $-NR^2-CO-N(R^2)_2$; $-CO-N(R^2)_2$; $-R^1-C_2-C_6$ alkenyl, which
is optionally substituted with one or more groups
independently selected from hydroxy, C_1-C_4 alkoxy, Ht, $-O-Ht$,
 $-NR^2-CO-N(R^2)_2$ or $-CO-N(R^2)_2$; or R^7 ;

wherein W is $-O-$, $-NR^2-$, $-S-$, $-C(O)-$, $-C(S)-$, $-C(=NR^2)-$,
 $-S(O)_2-$, $-NR^2-S(O)_2-$, $-S(O)_2-NR^2-$, $-NR^2-C(O)O-$, $-O-C(O)NR^2-$, $-NR^2-$
 $C(O)NR^2-$, $-NR^2-C(S)NR^2-$, $-CONR^2$, $-NR^2C(O)-$, $-C(S)NR^2$, $-NR^2C(S)-$,
 $-NR^2-C(=N-CN)-NR^2-$, $-NR^2C(=N-CN)O-$ or $-C(O)O-$;

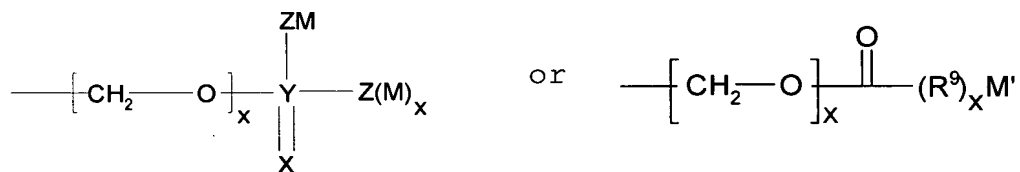
D' is selected from C_1-C_{15} alkyl, C_1-C_{15} alkoxy, C_2-C_{15}

alkenyl, C₂-C₁₅ alkenyloxy, C₂-C₁₅ alkynyl, or C₂-C₁₅ alkynyloxy, wherein D' optionally comprises one or more substituents independently selected from Ht, oxo, halo, -CF₃, -OCF₃, -NO₂, azido, -SH, -SR³, -N(R³)-N(R³)₂, -O-N(R³)₂, -(R³)N-O-(R³), -N(R³)₂, -CN, -CO₂R³, -C(O)-N(R³)₂, -S(O)_n-N(R³)₂, -N(R³)-C(O)-R³, -N(R³)-C(O)-N(R³)₂, -C(O)-R³, -S(O)_n-R³, -N(R³)-S(O)_n(R³), -N(R³)-S(O)_n-N(R³)₂, -S-NR³-C(O)R³, -C(S)N(R³)₂, -C(S)R³, -NR³-C(O)OR³, -O-C(O)OR³, -O-C(O)N(R³)₂, -NR³-C(S)R³, =N-OH, =N-OR³, =N-N(R³)₂, =NR³, =NNR³C(O)N(R³)₂, =NNR³C(O)OR³, =NNR³S(O)_n-N(R³)₂, -NR³-C(S)OR³, -NR³-C(S)N(R³)₂, -NR³-C[=N(R³)]-N(R³)₂, -N(R³)-C[=N-NO₂]-N(R³)₂, -N(R³)-C[=N-NO₂]-OR³, -OC(O)R³, -OC(S)R³, -OC(O)N(R³)₂, -C(O)N(R³)-N(R³)₂, -N(R³)-N(R³)C(O)R³, -N(R³)-OC(O)R³, -N(R³)-OC(O)R³, -N(R³)-OC(S)N(R³)₂, -OC(S)N(R³)(R³), or -PO₃-R³;

E is selected from Ht; O-Ht; Ht-Ht; Ht fused with Ht; -O-R³; -N(R²)(R³); -N(R²)-Ht; C₁-C₆ alkyl, which is optionally substituted with one or more groups selected from R⁴ or Ht; C₂-C₆ alkenyl, which is optionally substituted with one or more groups selected from R⁴ or Ht; C₃-C₆ saturated carbocycle, which is optionally substituted with one or more groups selected from R⁴ or Ht; or C₅-C₆ unsaturated carbocycle, which is optionally substituted with one or more groups selected from R⁴ or Ht;

each R^4 is independently selected from $-R^2$, $-OR^2$, $-OR^3$, $-SR^2$, $-SOR^2$, $-SO_2R^2$, $-CO_2R^2$, $-OC(O)-R^2$, $-C(O)-N(R^2)_2$, $-C(O)-NR^2(OR^2)$, $-S(O)_2-N(R^2)_2$, halo, $-NR^2-C(O)-R^2$, $-NR^2-OR^2$, $-N(R^2)_2$ or $-CN$;

each R^7 is independently selected from hydrogen,



wherein each M is independently selected from H, Li, Na, K, Mg, Ca, Ba, $-N(R^2)_4$, C_1 - C_{12} -alkyl, C_2 - C_{12} -alkenyl, or $-R^6$; wherein 1 to 4 $-CH_2$ radicals of the alkyl or alkenyl group, other than the $-CH_2$ that is bound to Z, is optionally replaced by a heteroatom group selected from O, S, $S(O)$, $S(O_2)$, or $N(R^2)$; and wherein any hydrogen in said alkyl, alkenyl or R^6 is optionally replaced with a substituent selected from oxo, $-C_1$ - C_4 alkyl, $-N(R^2)_2$, $-N(R^2)_3$, $-OH$, $-O-(C_1-C_4$ alkyl), $-CN$, $-C(O)OR^2$, $-C(O)-N(R^2)_2$, $S(O)_2-N(R^2)_2$, $-N(R^2)-C(O)-R^2$, $C(O)R^2$, $-S(O)_n-R^2$, $-OCF_3$, $-S(O)_n-R^6$, $-N(R^2)-S(O)_2(R^2)$, halo, $-CF_3$, or $-NO_2$;

M' is H, C_1 - C_{12} -alkyl, C_2 - C_{12} -alkenyl, or $-R^6$; wherein 1 to 4 $-CH_2$ radicals of the alkyl or alkenyl group is optionally replaced by a heteroatom group selected from O, S, $S(O)$, $S(O_2)$, or $N(R^2)$; and wherein any hydrogen in said alkyl,

alkenyl or R^6 is optionally replaced with a substituent selected from oxo, $-OR^2$, $-C_1-C_4$ alkyl, $-N(R^2)_2$, $N(R^2)_3$, $-OH$, $-O-(C_1-C_4 \text{ alkyl})$, $-CN$, $-C(O)OR^2$, $-C(O)-N(R^2)_2$, $-S(O)_2-N(R^2)_2$, $-N(R^2)-C(O)-R_2$, $-C(O)R^2$, $-S(O)_n-R^2$, $-OCF_3$, $-S(O)_n-R^6$, $-N(R^2)-S(O)_2(R^2)$, halo, $-CF_3$, or $-NO_2$;

x is 0 or 1;

Z is O, S, $N(R^2)_2$, or, when M is not present, H_i

[[.]]

Y is P or S;

X is O or S; and

R^9 is $C(R^2)_2$, O or $N(R^2)$; and wherein when Y is S, Z is not S; and

R^6 is a 5-6 membered saturated, partially saturated or unsaturated carbocyclic or heterocyclic ring system, or an 8-10 membered saturated, partially saturated or unsaturated bicyclic ring system; wherein any of said heterocyclic ring systems contains one or more heteroatoms selected from O, N, S, $S(O)_n$ or $N(R^2)$; and wherein any of said ring systems optionally contains 1 to 4 substituents independently selected from $-OH$, $-C_1-C_4$ alkyl, $-O-(C_1-C_4 \text{ alkyl})$ or $-O-C(O)-(C_1-C_4 \text{ alkyl})$.

2. (Original) The compound according to claim 1, wherein R^8 is $-C_1-C_4$ -branched or straight chain alkyl, wherein

one to two carbon atoms in said alkyl are independently replaced by W, wherein R^8 is additionally and optionally substituted with one or more groups independently selected from -OH; -C₁-C₄-alkoxy; -Ht; -O-Ht; -NR²-CO-N(R²)₂; -CO-N(R²)₂; -R¹-C₂-C₆ alkenyl, which is optionally substituted with one or more groups independently selected from hydroxy, C₁-C₄ alkoxy, Ht, -O-Ht, -NR²-CO-N(R²)₂ or -CO-N(R²)₂; or R⁷;

wherein W is -O-, -NR²-, -NR²-S(O)₂-, -NR²-C(O)O-, -O-C(O)NR²-, -NR²-C(O)NR²-, -NR²-C(S)NR²-, -NR²C(O)-, -C(=NR²)-, -C(O)NR²-, -NR²-C(=N-CN)-NR²-, -NR²C(=N-CN)O- or -C(O)O-; and

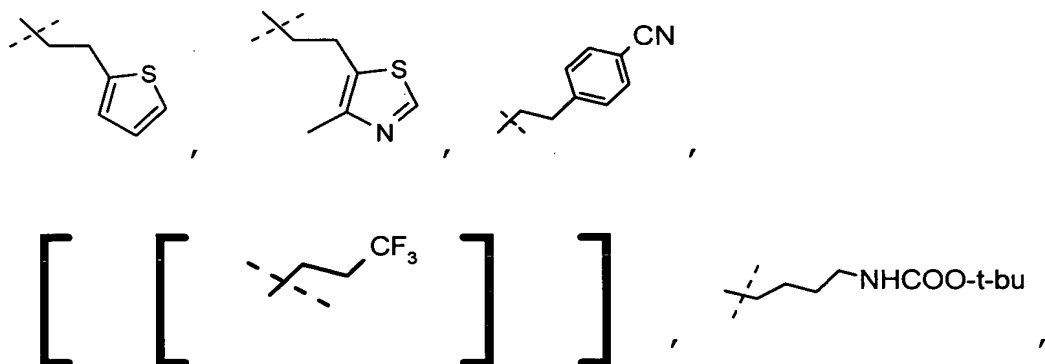
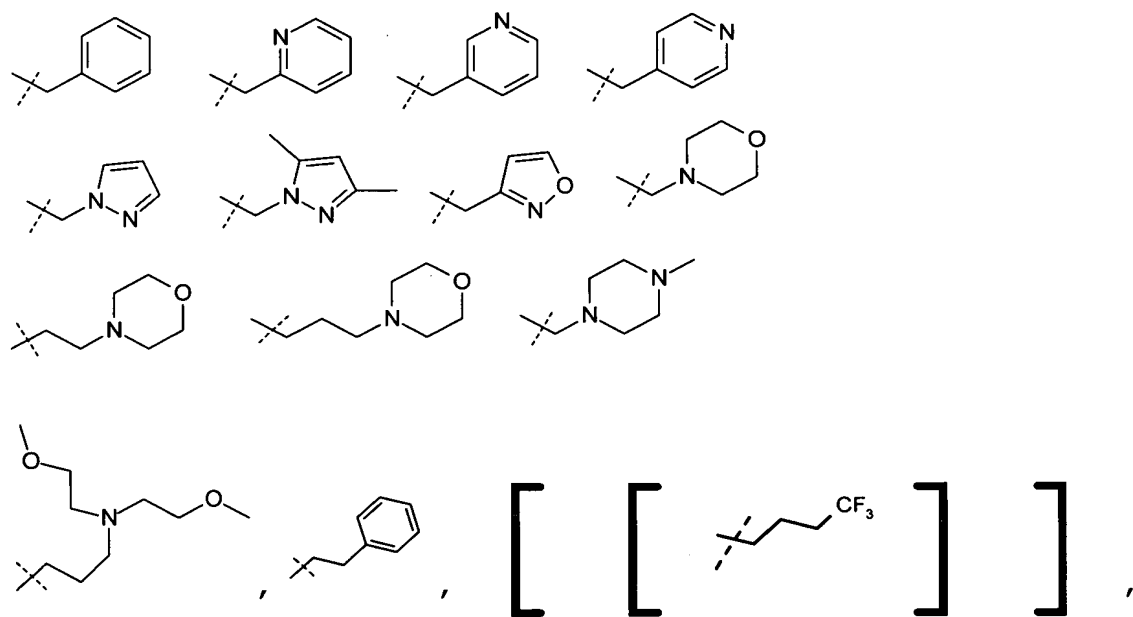
wherein Ht, R¹, R² and R⁷ are as defined in claim 1.

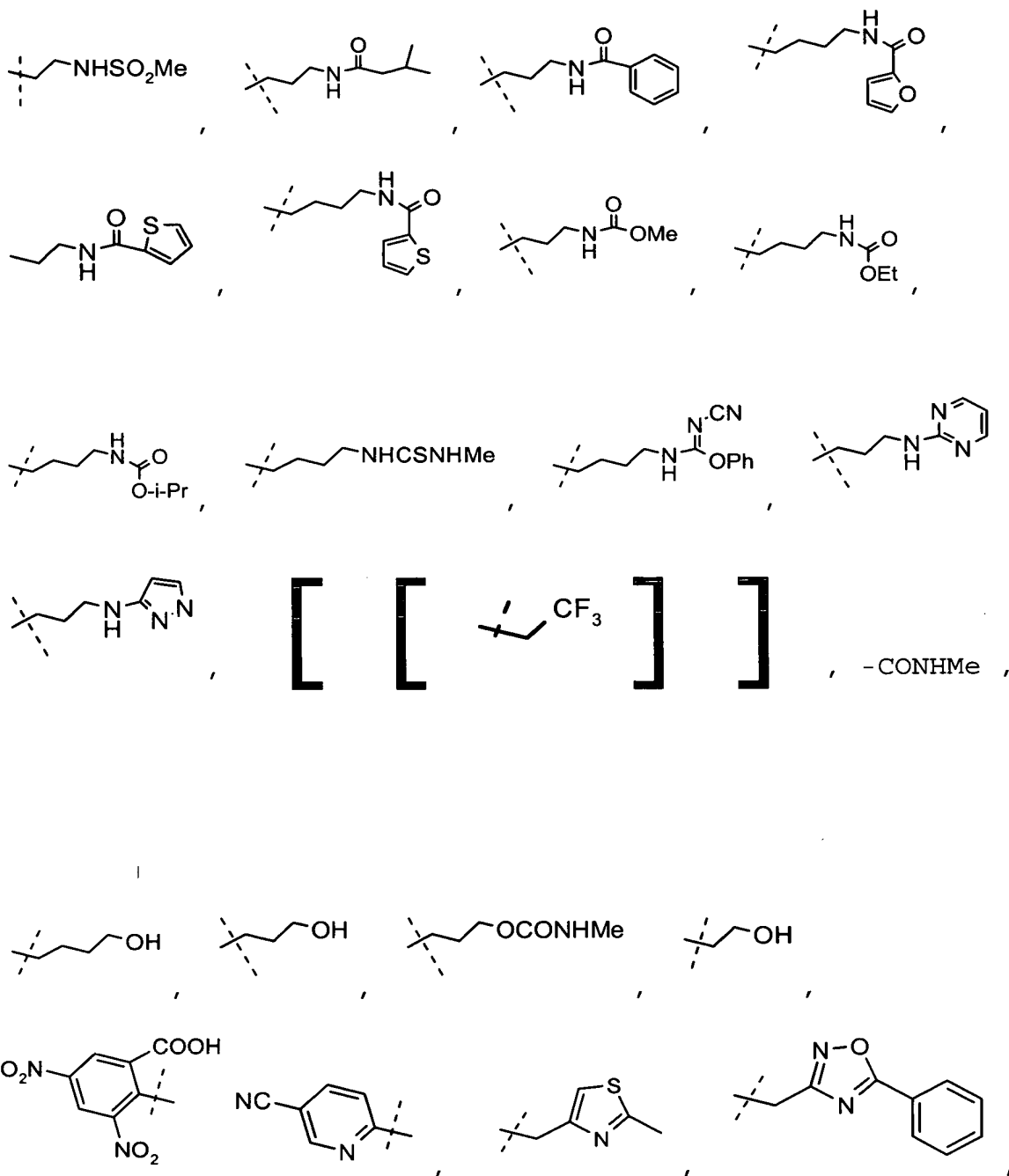
3. (Currently amended) The compound according to claim 1, wherein R⁸ is a -C₁-C₄-branched or straight alkyl chain, wherein one to two carbon atoms are substituted with Ht;

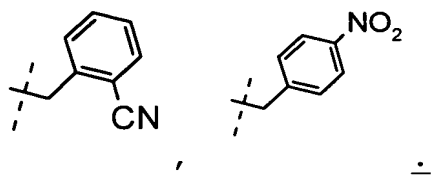
wherein Ht is C₆₋₁₄ aryl or a 5-7 membered saturated or unsaturated heterocycle, containing one or more heteroatoms selected from N, N(R²), O, S and S(O)_n, wherein any member of Ht is optionally substituted with one or more substituents independently selected from oxo, -OR², SR², -R², -N(R²)(R²), -R²-OH, -CN, -CO₂R², -C(O)-N(R²)₂, -S(O)₂-N(R²)₂, -N(R²)-C(O)-R², -N(R²)-C(O)O-R², -C(O)-R², -S(O)_n-R², -OCF₃, -S(O)_n-Q, methylenedioxy, -N(R²)-S(O)₂(R²), halo, -CF₃, -NO₂, Q, -OQ,

$$-\text{OR}^7, \quad -\text{SR}^7, \quad -\text{R}^7, \quad -\text{N}(\text{R}^2)(\text{R}^7) \text{ or } -\text{N}(\text{R}^7)_2 \quad [[;]]$$

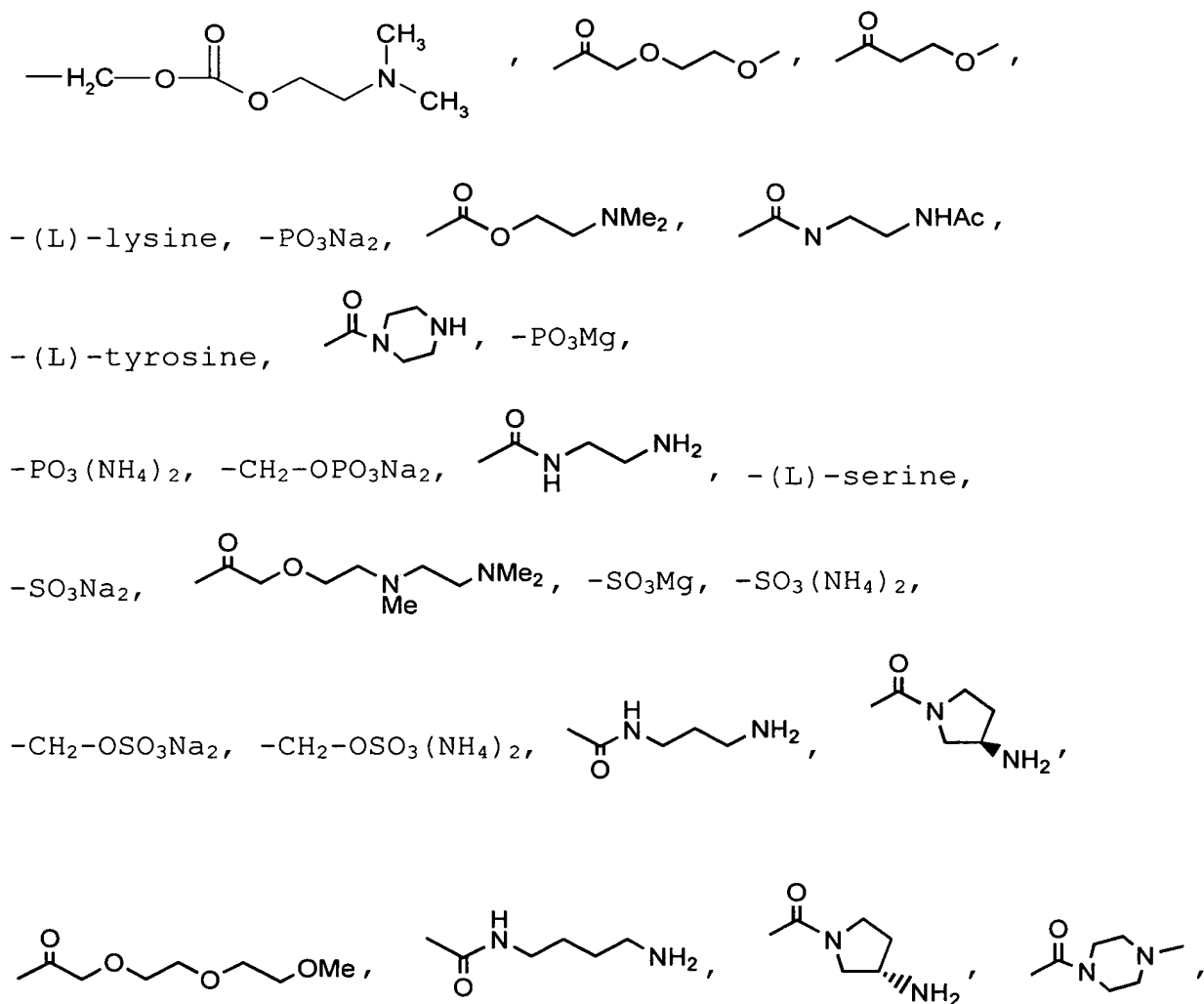
4. (Currently amended) The compound according to claim 1, wherein R⁸ is selected from:


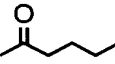
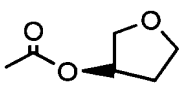
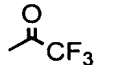


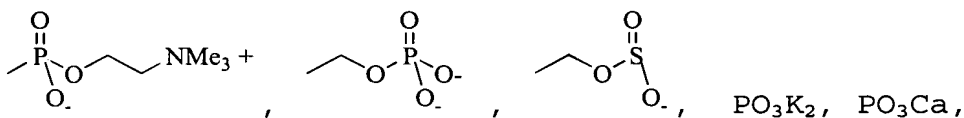
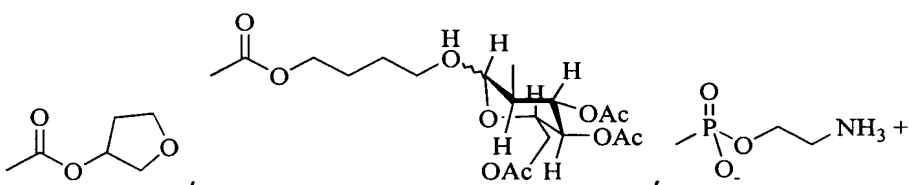




5. (Original) The compound according to claim 1, wherein at least one R⁷ is selected from:



acetyl, , , -(L)-valine, -(L)-glutamic acid,
-(L)-aspartic acid, -(L)-γ-t-butyl-aspartic acid, ,
-(L)-(L)-3-pyridylalanine, -(L)-histidine, -CHO, ,

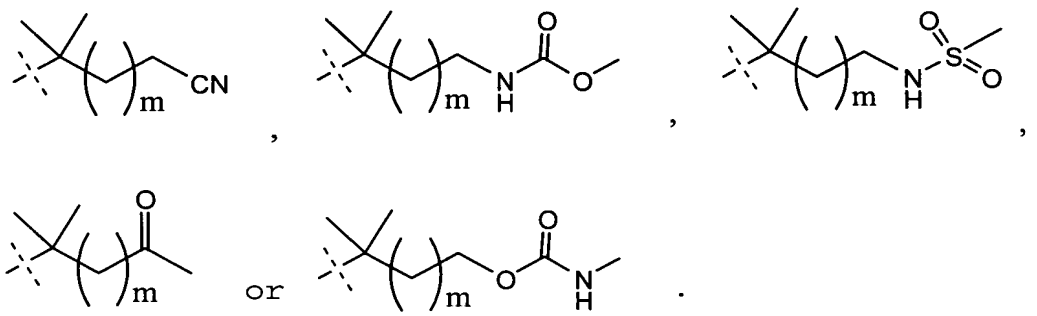


PO₃-spermine, PO₃-(spermidine)₂ or PO₃-(meglamine)₂.

6. (Canceled).

7. (Original) The compound according to claim 1,
wherein:

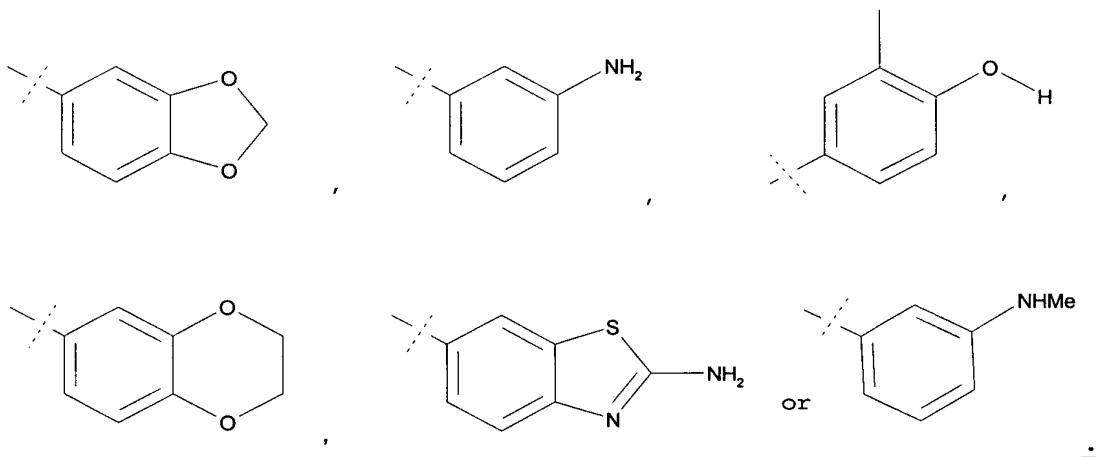
D' is -CH₂-R'', wherein R'' is selected from:
isobutyl,



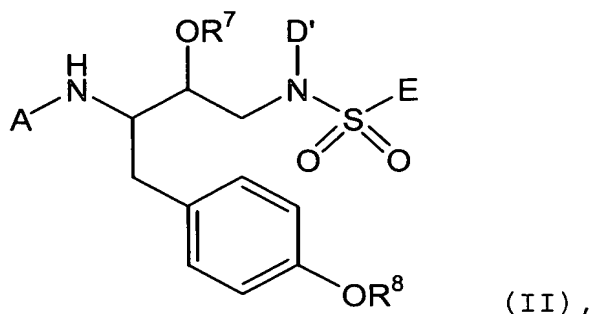
wherein m is 0 to 3.

8. (Currently amended) The compound according to claim 1, wherein:

E is selected from:



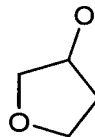
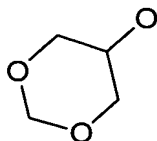
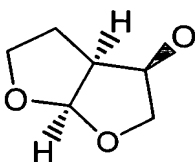
9. (Currently amended) The A compound according to ~~claim 1~~, having the formula (II):



and pharmaceutically acceptable salts thereof;

wherein:

A is selected from R'-C(O)-, wherein R' is selected from R¹-C₁-C₆ alkyl,



, or ;

each R¹ is independently selected from -C(O)-, -S(O)₂-, -C(O)-C(O)-, -O-C(O)-, -O-S(O)₂-, -NR²-, -NR²-S(O)₂-, -NR²-C(O)- or -NR²-C(O)-C(O)-;

each Ht is independently selected from C₃-C₇ cycloalkyl; C₅-C₇ cycloalkenyl; C₆-C₁₄ aryl; or a 5-7 membered saturated or unsaturated heterocycle, containing one or more heteroatoms selected from N, N(R²), O, S and S(O)_n; wherein said aryl or said heterocycle is optionally fused to Q; and wherein any member of said Ht is optionally substituted with one or more substituents independently selected from oxo, -OR²,

SR², -R², -N(R²)(R²), -R²-OH, -CN, -CO₂R², -C(O)-N(R²)₂,
-S(O)₂-N(R²)₂, -N(R²)-C(O)-R², -N(R²)-C(O)O-R², -C(O)-R²,
-S(O)_n-R², -OCF₃, -S(O)_n-Q, methylenedioxy, -N(R²)-S(O)₂(R²),
halo, -CF₃, -NO₂, Q, -OO, -OR⁷, -SR⁷, -R⁷, -N(R²)(R⁷) or -N(R⁷)₂;

each R² is independently selected from H, or C₁-C₄
alkyl optionally substituted with a 3-7 membered saturated,
partially saturated or unsaturated carbocyclic ring system; or
a 5-7 membered saturated, partially saturated or unsaturated
heterocyclic ring containing one or more heteroatoms selected
from O, N, S, S(O)_n or N(R³³); wherein any of said ring systems
or N(R³³) is optionally substituted with 1 to 4 substituents
independently selected from -X'-Y', -O-arylalkyl,
-S-arylalkyl, -N(Y')₂, -N(H)-arylalkyl, -N(C₁-C₄
alkyl)-arylalkyl, oxo, -O-(C₁-C₄ alkyl), OH, C₁-C₄ alkyl, -SO₂H,
-SO₂-(C₁-C₄ alkyl), -SO₂-NH₂, -SO₂-NH(C₁-C₄ alkyl), -SO₂-N(C₁-C₄
alkyl)₂, -NH₂, -NH(C₁-C₄ alkyl), -N(C₁-C₄ alkyl)₂, -NH-C(O)H,
-N(C₁-C₄ alkyl)-C(O)H, -NH-C(O)-C₁-C₄ alkyl, -C₁-C₄ alkyl-OH,
-OH, -CN, -C(O)OH, -C(O)O-C₁-C₄ alkyl, -C(O)-NH₂,
-C(O)-NH(C₁-C₄ alkyl), -C(O)-N(C₁-C₄ alkyl)₂, halo or -CF₃;

X' is -O-, -S-, -NH-, -NHC(O)-, -NHC(O)O-, -NHSO₂-,
or -N(C₁-C₄)alkyl-;

Y' is C₁-C₁₅ alkyl, C₂-C₁₅ alkenyl or alkynyl, wherein
one to five carbon atoms in Y are optionally substituted with
C₃-C₇ cycloalkyl or C₅-C₆ cycloalkenyl, C₆-C₁₄ aryl or a 5-7

membered saturated or unsaturated heterocycle, containing one or more heteroatoms selected from N, NH, O, S and S(O)_n;

each R³ is independently selected from H, Ht, C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, C₃-C₆ cycloalkyl or C₅-C₆ cycloalkenyl; wherein any member of said R³, except H, is optionally substituted with one or more substituents selected from -OR², -C(O)-N(R²)₂, -S(O)_n-N(R²)₂, -N(R²)₂, -N(R²)-C(O)O(R²), -N(R²)-C(O)N(R²)₂, -N(R²)-C(O)-R², Ht, -CN, -SR², -C(O)OR², N(R²)-C(O)-R²;

each R³³ is selected from H, C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, C₃-C₆ cycloalkyl or C₅-C₆ cycloalkenyl, C₆-C₁₄ aryl or a 5-7 membered saturated or unsaturated heterocycle, containing one or more heteroatoms selected from N, NH, O, S and S(O)_n;

each n is independently 1 or 2;

each Q is independently selected from a 3-7 membered saturated, partially saturated or unsaturated carbocyclic ring system; or a 5-7 membered saturated, partially saturated or unsaturated heterocyclic ring containing one or more heteroatoms selected from O, N, S, S(O)_n or N(R²); wherein Q contains one substituent selected from -OR², -OR⁸, -O-arylalkyl, -SR⁸, -S-arylalkyl, -N(R²)R⁸, -N(R²)-arylalkyl and may be optionally substituted with one or more additional substituents independently selected from oxo, -OR⁸,

-O-arylalkyl -SR⁸, -S-arylalkyl, -N(R²)R⁸, -N(R²)-arylalkyl, -OR², -R², -SO₂R², -SO₂-N(R²)₂, -N(R²)₂, -N(R²)-C(O)-R², -OH, (C₁-C₄)-OH, -CN, -CO₂R², -C(O)-N(R²)₂, halo or -CF₃;

each R⁸ is independently selected from Ht, -C₁-C₁₅ branched or straight chain alkyl, alkenyl or alkynyl wherein one to five carbon atoms in said alkyl, alkenyl or alkynyl are independently replaced by W, or wherein one to five carbon atoms in said alkyl, alkenyl or alkynyl are substituted with Ht; and wherein R⁸ is additionally and optionally substituted with one or more groups independently selected from -OH, -S(C₁-C₆ alkyl), -CN, -CF₃, -N(R²)₂, halo, -C₁-C₄-alkyl, -C₁-C₄-alkoxy; -Ht; -O-Ht; -NR²-CO-N(R²)₂; -CO-N(R²)₂; -R¹-C₂-C₆ alkenyl, which is optionally substituted with one or more groups independently selected from hydroxy, C₁-C₄ alkoxy, Ht, -O-Ht, -NR²-CO-N(R²)₂ or -CO-N(R²)₂; or R⁷;

wherein W is -O-, -NR²-, -S-, -C(O)-, -C(S)-, -C(=NR²)-, -S(O)₂-, -NR²-S(O)₂-, -S(O)₂-NR²-, -NR²-C(O)O-, -O-C(O)NR²-, -NR²-C(O)NR²-, -NR²-C(S)NR²-, -CONR², -NR²C(O)-, -C(S)NR², -NR²C(S)-, -NR²-C(=N-CN)-NR²-, -NR²C(=N-CN)O- or -C(O)O-;

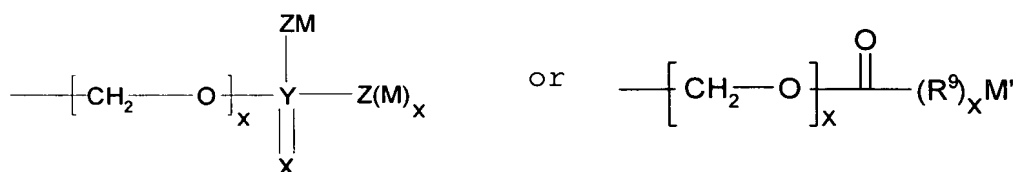
D' is selected from C₁-C₁₅ alkyl, C₁-C₁₅ alkoxy, C₂-C₁₅ alkenyl, C₂-C₁₅ alkenyloxy, C₂-C₁₅ alkynyl, or C₂-C₁₅ alkynyloxy, wherein D' optionally comprises one or more substituents independently selected from Ht, oxo, halo, -CF₃, -OCF₃, -NO₂, azido, -SH, -SR³, -N(R³)-N(R³)₂, -O-N(R³)₂, -(R³)N-O-(R³),

-N(R³)₂, -CN, -CO₂R³, -C(O)-N(R³)₂, -S(O)_n-N(R³)₂, -N(R³)-C(O)-R³,
-N(R³)-C(O)-N(R³)₂, -C(O)-R³, -S(O)_n-R³, -N(R³)-S(O)_n(R³),
-N(R³)-S(O)_n-N(R³)₂, -S-NR³-C(O)R³, -C(S)N(R³)₂, -C(S)R³,
-NR³-C(O)OR³, -O-C(O)OR³, -O-C(O)N(R³)₂, -NR³-C(S)R³, =N-OH,
=N-OR³, =N-N(R³)₂, =NR³, =NNR³C(O)N(R³)₂, =NNR³C(O)OR³,
=NNR³S(O)_n-N(R³)₂, -NR³-C(S)OR³, -NR³-C(S)N(R³)₂,
-NR³-C[=N(R³)]-N(R³)₂, -N(R³)-C[=N-NO₂]-N(R³)₂,
-N(R³)-C[=N-NO₂]-OR³, -OC(O)R³, -OC(S)R³, -OC(O)N(R³)₂,
-C(O)N(R³)-N(R³)₂, -N(R³)-N(R³)C(O)R³, -N(R³)-OC(O)R³,
-N(R³)-OC(O)R³, -N(R³)-OC(O)R³, -OC(S)N(R³)₂, -OC(S)N(R³)(R³), or
-PO₃-R³;

E is selected from Ht; O-Ht; Ht-Ht; Ht fused with
Ht; -O-R³; -N(R²)(R³); -N(R²)-Ht; C₁-C₆ alkyl, which is
optionally substituted with one or more groups selected from R⁴
or Ht; C₂-C₆ alkenyl, which is optionally substituted with one
or more groups selected from R⁴ or Ht; C₃-C₆ saturated
carbocycle, which is optionally substituted with one or more
groups selected from R⁴ or Ht; or C₅-C₆ unsaturated carbocycle,
which is optionally substituted with one or more groups
selected from R⁴ or Ht;

each R⁴ is independently selected from -R², -OR²,
-OR³, -SR², -SOR², -SO₂R², -CO₂R², -OC(O)-R², -C(O)-N(R²)₂,
-C(O)-NR²(OR²), -S(O)₂-N(R²)₂, halo, -NR²-C(O)-R², -NR²-OR²,
-N(R²)₂ or -CN;

each R⁷ is independently selected from hydrogen,



wherein each M is independently selected
from H, Li, Na, K, Mg, Ca, Ba, -N(R²)₄, C₁-C₁₂-alkyl,
C₂-C₁₂-alkenyl, or -R⁶; wherein 1 to 4 -CH₂ radicals of the
alkyl or alkenyl group, other than the -CH₂ that is bound to Z,
is optionally replaced by a heteroatom group selected from O,
S, S(O), S(O₂), or N(R²); and wherein any hydrogen in said
alkyl, alkenyl or R⁶ is optionally replaced with a substituent
selected from oxo, -C₁-C₄ alkyl, -N(R²)₂, -N(R²)₃, -OH, -O-(C₁-C₄
alkyl), -CN, -C(O)OR², -C(O)-N(R²)₂, S(O)₂-N(R²)₂,
-N(R²)-C(O)-R₂, C(O)R², -S(O)_n-R², -OCF₃, -S(O)_n-R⁶,
-N(R²)-S(O)₂(R²), halo, -CF₃, or -NO₂;

M' is H, C₁-C₁₂-alkyl, C₂-C₁₂-alkenyl, or -R⁶; wherein
1 to 4 -CH₂ radicals of the alkyl or alkenyl group is
optionally replaced by a heteroatom group selected from O, S,
S(O), S(O₂), or N(R²); and wherein any hydrogen in said alkyl,
alkenyl or R⁶ is optionally replaced with a substituent
selected from oxo, -OR², -C₁-C₄ alkyl, -N(R²)₂, N(R²)₃, -OH,
-O-(C₁-C₄ alkyl), -CN, -C(O)OR², -C(O)-N(R²)₂, -S(O)₂-N(R²)₂,

-N(R²)-C(O)-R₂, -C(O)R², -S(O)_n-R², -OCF₃, -S(O)_n-R⁶,

-N(R²)-S(O)₂(R²), halo, -CF₃, or -NO₂;

x is 0 or 1;

Z is O, S, N(R²)₂, or, when M is not present, H;

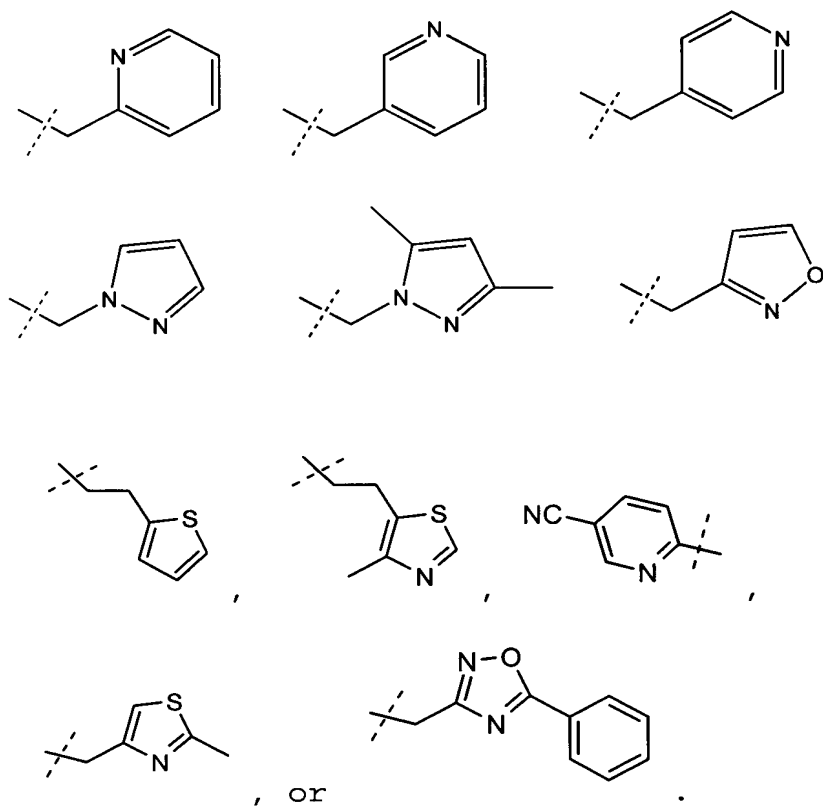
Y is P or S;

X is O or S; and

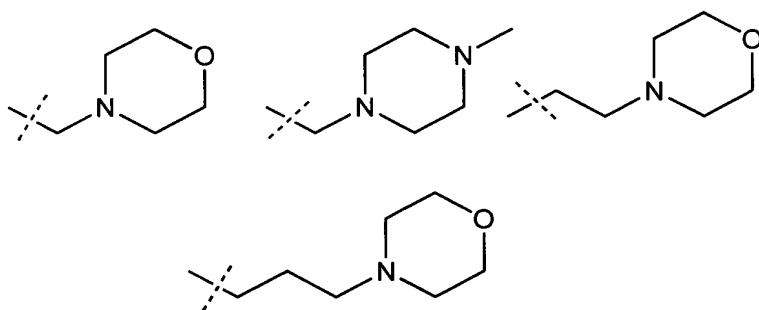
R⁹ is C(R²)₂, O or N(R²); and wherein when Y is S, Z
is not S; and

R⁶ is a 5-6 membered saturated, partially saturated
or unsaturated carbocyclic or heterocyclic ring system, or an
8-10 membered saturated, partially saturated or unsaturated
bicyclic ring system; wherein any of said heterocyclic ring
systems contains one or more heteroatoms selected from O, N,
S, S(O)_n or N(R²); and wherein any of said ring systems
optionally contains 1 to 4 substituents independently selected
from -OH, -C₁-C₄ alkyl, -O-(C₁-C₄ alkyl) or -O-C(O)-(C₁-C₄
alkyl) wherein A, R⁷, D¹, R⁸ and E are as defined in claim 1.

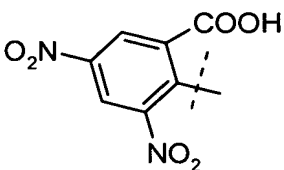
10. (Original) The compound according to claim 9,
wherein R⁸ is selected from:



11. (Original) The compound according to claim 9,
 wherein R^8 is selected from:

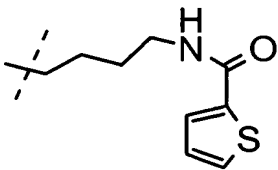


12. (Original) The compound according to claim 9,
 wherein R^8 is selected from:



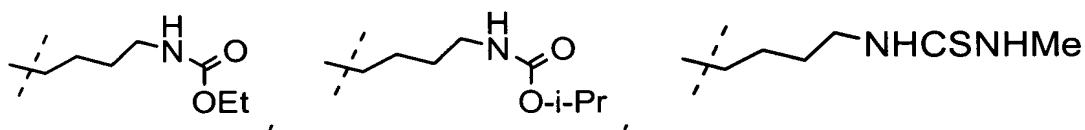
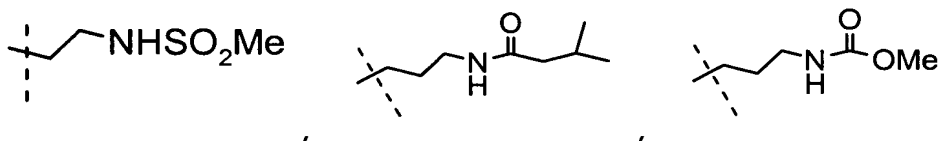
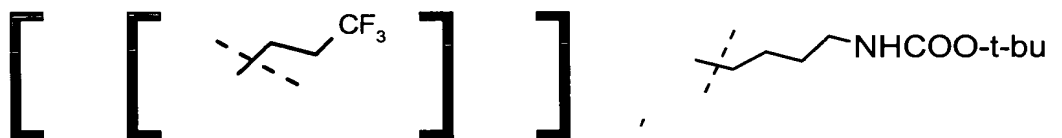
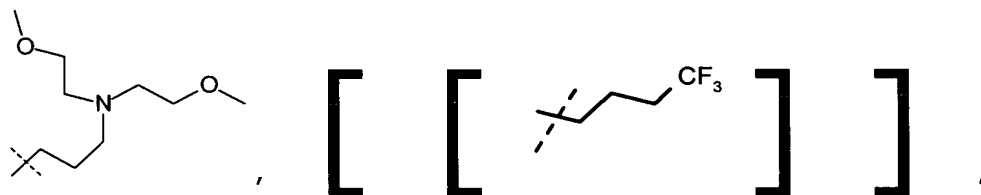
or

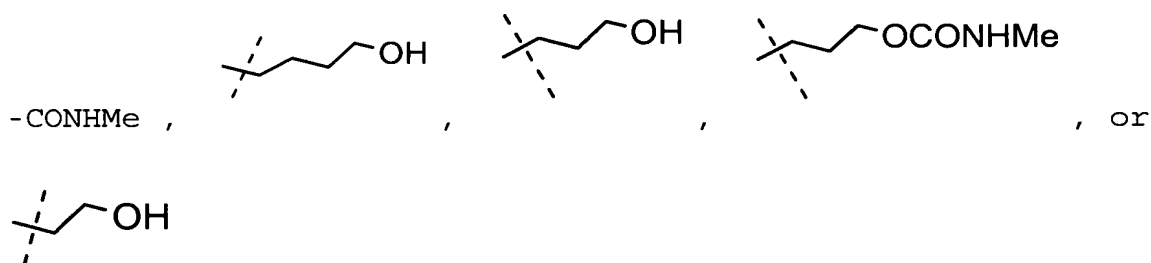
wherein R^8 is selected from:



or

14. (Currently amended) The compound according to claim 9, wherein R⁸ is selected from:





15. (Currently amended) The compound according to claim 9, wherein said compound is selected from compound numbers: ~~18, 19, 20,~~ 22, 24, 25, 26, 27, 31, 33, 35, 36, 38, 41, 43, 48, 49, 51, 52, 53, 54, 55, 56, 57, ~~58,~~ 59, 60, ~~68,~~ 69, 71, 72, 73, 74, ~~202-204~~ 202, 203, 209, 213, 215, ~~217,~~ 223, 227, 231, 233, 236, 237, 239, 243, 247, 250, 260, 263, 271, 281, 289, 293, 295, ~~304,~~ 309, 317, 319, 320, 322, 334, 335, 348, 364, 367, 368, 375, 382, 383 and 396.

16. (Currently amended) The compound according to claim 15, wherein said compound is selected from compound

numbers: 26, 27, 31, 33, 35, 36, 38, 41, 43, 48, 49, 51, 52, 53, 54, 55, 56, 57, ~~58~~, 59, 60, 69, 71, 72, 73, 74, 209, 215, 227, 233, 237, 281, 289, 295, ~~304~~, 309, 322, 335, 364, 368, 382 and 383.

17. (Currently amended) The compound according to claim 16, wherein said compound is selected from: 54, 209, 237, 281, 295, 309, ~~367~~ and 368.

18. (Currently amended) A composition comprising a compound according to claim 1 or 9, in an amount sufficient to inhibit an aspartyl protease; and a pharmaceutically acceptable carrier.

19. (Original) The composition according to claim 18, wherein said composition is in a pharmaceutically acceptable form for administration to a human being.

20. (Original) The composition according to claim 18, wherein said composition additionally comprises an additional anti-viral agent.

21. (Original) The composition according to claim 18, wherein said composition comprises at least one additional

therapeutic agent selected from (1 alpha, 2 beta, 3 alpha)-9-[2,3-bis(hydroxymethyl)cyclobutyl]-guanine [(-)BHCG, SQ-34514]; oxetanocin-G (3,4-bis-(hydroxymethyl)-2-oxetanosyl]guanine); acyclic nucleosides, such as acyclovir, valaciclovir, famciclovir, ganciclovir or penciclovir; acyclic nucleoside phosphonates, such as (S)-1-(3-hydroxy-2-phosphonyl-methoxypropyl)cytosine (HPMPC); ribonucleotide reductase inhibitors, such as 2-acetylpyridine 5-[(2-chloroanilino)thiocarbonyl] thiocarbonohydrazone, 3'-azido-3'-deoxythymidine; other 2',3'-dideoxynucleosides such as 2',3'-dideoxycytidine, 2',3'-dideoxyadenosine, 2',3'-dideoxyinosine, or 2',3'-didehydrothymidine; other aspartyl protease inhibitors, such as indinavir, ritonavir, nelfinavir, or [3S-[3R*(1R*, 2S*)]]-[3[[[4-aminophenyl)sulfonyl](2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-tetrahydro-3-furanyl ester (amprenavir); oxathiolane nucleoside analogues, such as (-)-cis-1-(2-hydroxymethyl)-1,3-oxathiolane 5-yl)-cytosine (lamivudine) or cis-1-(2-(hydroxymethyl)-1,3-oxathiolan-5-yl)-5-fluorocytosine (FTC); 3'-deoxy-3'-fluorothymidine; 5-chloro-2',3'-dideoxy-3'-fluorouridine; (-)-cis-4-[2-amino-6-(cyclopropylamino)-9H-purin-9-yl]-2-cyclopentene-1-methanol; ribavirin; 9-[4-hydroxy-2-(hydroxymethyl)but-1-yl]-guanine (H2G); tat inhibitors, such as 7-chloro-5-(2-pyrryl)-3H-1,4-

benzodiazepin-2-(H)one (Ro5-3335) or 7-chloro-1,3-dihydro-5-(1H-pyrrol-2-yl)-3H-1,4-benzodiazepin-2-amine (Ro24-7429); interferons, such as α -interferon; renal excretion inhibitors such as probenecid; nucleoside transport inhibitors such as dipyridamole; pentoxifylline; N-acetylcysteine (NAC); Procysteine; α -trichosanthin; phosphonoformic acid; immunomodulators, such as interleukin II or thymosin; granulocyte macrophage colony stimulating factors; erythropoetin; soluble CD₄ and genetically engineered derivatives thereof; non-nucleoside reverse transcriptase inhibitors (NNRTIs), such as nevirapine (BI-RG-587), loviride (α -APA) or delavuridine (BHAP); phosphonoformic acid; 1,4-dihydro-2H-3,1-benzoxazin-2-ones NNRTIs, such as (-)-6-chloro-4-cyclopropylethynyl-4-trifluoromethyl-1,4-dihydro-2H-3,1-benzoxazin-2-one (L-743,726 or DMP-266); or quinoxaline NNRTIs, such as isopropyl (2S)-7-fluoro-3,4-dihydro-2-ethyl-3-oxo-1(2H)-quinoxalinecarboxylate (HBY1293).

22. (Currently amended) The composition according to ~~any one of claims 18-21~~ claim 18, wherein said composition is in an orally available dosage form.

23. (Original) A method of treating a patient infected with a virus that depends upon an aspartyl protease

for an obligatory event in its life cycle comprising the step of administering to said patient a composition according to claim 18.

24. (Original) A method of treating a patient infected with HIV-I or HIV-II comprising the step of administering to said patient a composition according to claim 18.

25. (Currently amended) The method according to claim 23 ~~or 24~~, comprising the additional step of administering to said patient an additional therapeutic agent selected from (1 alpha, 2 beta, 3 alpha)-9-[2,3-bis(hydroxymethyl) cyclobutyl]guanine [(-)BHCG, SQ-34514]; oxetanocin-G (3,4-bis-(hydroxymethyl)-2-oxetanosyl]guanine); acyclic nucleosides, such as acyclovir, valaciclovir, famciclovir, ganciclovir or penciclovir; acyclic nucleoside phosphonates, such as (S)-1-(3-hydroxy-2-phosphonyl-methoxypropyl)cytosine (HPMPC); ribonucleotide reductase inhibitors, such as 2-acetylpyridine 5-[(2-chloroanilino)thiocarbonyl] thiocarbonohydrazone, 3'-azido-3'-deoxythymidine; other 2',3'-dideoxynucleosides such as 2',3'-dideoxycytidine, 2',3'-dideoxyadenosine, 2',3'-dideoxyinosine, or 2',3'-didehydrothymidine; other aspartyl protease

inhibitors, such as indinavir, ritonavir, nelfinavir, or [3S-[3R*(1R*, 2S*)]]-[3[[[4-aminophenyl)sulfonyl](2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-tetrahydro-3-furanyl ester (amprenavir); oxathiolane nucleoside analogues, such as (-)-cis-1-(2-hydroxymethyl)-1,3-oxathiolane 5-yl)-cytosine (lamivudine) or cis-1-(2-(hydroxymethyl)-1,3-oxathiolan-5-yl)-5-fluorocytosine (FTC); 3'-deoxy-3'-fluorothymidine; 5-chloro-2',3'-dideoxy-3'-fluorouridine; (-)-cis-4-[2-amino-6-(cyclopropylamino)-9H-purin-9-yl]-2-cyclopentene-1-methanol; ribavirin; 9-[4-hydroxy-2-(hydroxymethyl)but-1-yl]-guanine (H2G); tat inhibitors, such as 7-chloro-5-(2-pyrryl)-3H-1,4-benzodiazepin-2-(H)one (Ro5-3335) or 7-chloro-1,3-dihydro-5-(1H-pyrrol-2-yl)-3H-1,4-benzodiazepin-2-amine (Ro24-7429); interferons, such as α -interferon; renal excretion inhibitors such as probenecid; nucleoside transport inhibitors such as dipyridamole; pentoxifylline; N-acetylcysteine (NAC); Procysteine; α -trichosanthin; phosphonoformic acid; immunomodulators, such as interleukin II or thymosin; granulocyte macrophage colony stimulating factors; erythropoetin; soluble CD₄ and genetically engineered derivatives thereof; non-nucleoside reverse transcriptase inhibitors (NNRTIs), such as nevirapine (BI-RG-587), loviride (α -APA) or delavuridine (BHAP); phosphonoformic acid; 1,4-

dihydro-2H-3,1-benzoxazin-2-ones NNRTIs, such as (-)-6-chloro-4-cyclopropylethynyl-4-trifluoromethyl-1,4-dihydro-2H-3,1-benzoxazin-2-one (L-743,726 or DMP-266); or quinoxaline NNRTIs, such as isopropyl (2S)-7-fluoro-3,4-dihydro-2-ethyl-3-oxo-1(2H)-quinoxalinecarboxylate (HBY1293), wherein said additional agent is administered to said patient as either a separate dosage form or as a single dosage form together with said compound.

26. (Original) A method of treating a patient diagnosed with AIDS; AIDS related complex (ARC); progressive generalized lymphadenopathy (PGL); Kaposi's sarcoma, thrombocytopenic purpura; AIDS-related neurological conditions such as AIDS dementia complex, multiple sclerosis or tropical paraperesis; anti-HIV antibody-positive conditions; or HIV-positive conditions, comprising the step of administering to said patient a composition according to claim 18.

27. (Original) The method according to claim 26, comprising the additional step of administering to said patient an additional therapeutic agent selected from (1 alpha, 2 beta, 3 alpha)-9-[2,3-bis(hydroxymethyl)cyclobutyl]guanine [(-)BHCG, SQ-34514]; oxetanocin-G (3,4-bis-(hydroxymethyl)-2-oxetanosyl]guanine); acyclic nucleosides,

such as acyclovir, valaciclovir, famciclovir, ganciclovir or penciclovir; acyclic nucleoside phosphonates, such as (S)-1-(3-hydroxy-2-phosphonyl-methoxypropyl)cytosine (HPMPC); ribonucleotide reductase inhibitors, such as 2-acetylpyridine 5-[(2-chloroanilino)thiocarbonyl] thiocarbonohydrazone, 3'-azido-3'-deoxythymidine; other 2',3'-dideoxynucleosides such as 2',3'-dideoxycytidine, 2',3'-dideoxyadenosine, 2',3'-dideoxyinosine, or 2',3'-didehydrothymidine; other aspartyl protease inhibitors, such as indinavir, ritonavir, nelfinavir, or [3S-[3R*(1R*, 2S*)]]-[3[[[4-aminophenyl)sulfonyl](2-methylpropyl)amino]-2-hydroxy-1-(phenylmethyl)propyl]-tetrahydro-3-furanyl ester (amprenavir); oxathiolane nucleoside analogues, such as (-)-cis-1-(2-hydroxymethyl)-1,3-oxathiolane 5-yl)-cytosine (lamivudine) or cis-1-(2-(hydroxymethyl)-1,3-oxathiolan-5-yl)-5-fluorocytosine (FTC); 3'-deoxy-3'-fluorothymidine; 5-chloro-2',3'-dideoxy-3'-fluorouridine; (-)-cis-4-[2-amino-6-(cyclopropylamino)-9H-purin-9-yl]-2-cyclopentene-1-methanol; ribavirin; 9-[4-hydroxy-2-(hydroxymethyl)but-1-yl]-guanine (H2G); tat inhibitors, such as 7-chloro-5-(2-pyrryl)-3H-1,4-benzodiazepin-2-(H)one (Ro5-3335) or 7-chloro-1,3-dihydro-5-(1H-pyrrol-2-yl)-3H-1,4-benzodiazepin-2-amine (Ro24-7429); interferons, such as α -interferon; renal excretion inhibitors such as probenecid; nucleoside transport inhibitors such as

dipyridamole; pentoxifylline; N-acetylcysteine (NAC);
Procysteine; α -trichosanthin; phosphonoformic acid;
immunomodulators, such as interleukin II or thymosin;
granulocyte macrophage colony stimulating factors;
erythropoietin; soluble CD₄ and genetically engineered
derivatives thereof; non-nucleoside reverse transcriptase
inhibitors (NNRTIs), such as nevirapine (BI-RG-587), zalcitabine
(α -APA) or delaviridine (BHAP); phosphonoformic acid; 1,4-
dihydro-2H-3,1-benzoxazin-2-ones NNRTIs, such as (-)-6-chloro-
4-cyclopropylethynyl-4-trifluoromethyl-1,4-dihydro-2H-3,1-
benzoxazin-2-one (L-743,726 or DMP-266); or quinoxaline
NNRTIs, such as isopropyl (2S)-7-fluoro-3,4-dihydro-2-ethyl-3-
oxo-1(2H)-quinoxalinecarboxylate (HBY1293), wherein said
additional agent is administered to said patient as either a
separate dosage form or as a single dosage form together with
said compound.

28. (New) The compound according to claim 15,
wherein said compound is compound number 368.

29. (New) The composition according to claim 19,
wherein said composition is in an orally available dosage
form.

30. (New) The composition according to claim 20, wherein said composition is in an orally available dosage form.

31. (New) The composition according to claim 21, wherein said composition is in an orally available dosage form.

32. (New) The method according to claim 24, comprising the additional step of administering to said patient an additional therapeutic agent selected from (1 alpha, 2 beta, 3 alpha)-9-[2,3-bis(hydroxymethyl)cyclobutyl]guanine [(-)BHCG, SQ-34514]; oxetanocin-G (3,4-bis-(hydroxymethyl)-2-oxetanosyl]guanine); acyclic nucleosides, such as acyclovir, valaciclovir, famciclovir, ganciclovir or penciclovir; acyclic nucleoside phosphonates, such as (S)-1-(3-hydroxy-2-phosphonyl-methoxypropyl)cytosine (HPMPC); ribonucleotide reductase inhibitors, such as 2-acetylpyridine 5-[(2-chloroanilino)thiocarbonyl) thiocarbonohydrazone, 3'-azido-3'-deoxythymidine; other 2',3'-dideoxynucleosides such as 2',3'-dideoxycytidine, 2',3'-dideoxyadenosine, 2',3'-dideoxyinosine, or 2',3'-didehydrothymidine; other aspartyl protease inhibitors, such as indinavir, ritonavir, nelfinavir, or [3S-[3R*(1R*, 2S*)]]-[3[[[4-aminophenyl)sulfonyl](2-

methylpropyl) amino]-2-hydroxy-1-(phenylmethyl)propyl]-
tetrahydro-3-furanyl ester (amprenavir); oxathiolane
nucleoside analogues, such as (-)-cis-1-(2-hydroxymethyl)-1,3-
oxathiolane 5-yl)-cytosine (lamivudine) or cis-1-(2-
(hydroxymethyl)-1,3-oxathiolan-5-yl)-5-fluorocytosine (FTC);
3'-deoxy-3'-fluorothymidine; 5-chloro-2',3'-dideoxy-3'-
fluorouridine; (-)-cis-4-[2-amino-6-(cyclopropylamino)-9H-
purin-9-yl]-2-cyclopentene-1-methanol; ribavirin; 9-[4-
hydroxy-2-(hydroxymethyl)but-1-yl]-guanine (H2G); tat
inhibitors, such as 7-chloro-5-(2-pyrryl)-3H-1,4-
benzodiazepin-2-(H)one (Ro5-3335) or 7-chloro-1,3-dihydro-5-
(1H-pyrrol-2-yl)-3H-1,4-benzodiazepin-2-amine (Ro24-7429);
interferons, such as α -interferon; renal excretion inhibitors
such as probenecid; nucleoside transport inhibitors such as
dipyridamole; pentoxifylline; N-acetylcysteine (NAC);
Procysteine; α -trichosanthin; phosphonoformic acid;
immunomodulators, such as interleukin II or thymosin;
granulocyte macrophage colony stimulating factors;
erythropoietin; soluble CD₄ and genetically engineered
derivatives thereof; non-nucleoside reverse transcriptase
inhibitors (NNRTIs), such as nevirapine (BI-RG-587), loviride
(α -APA) or delavuridine (BHAP); phosphonoformic acid; 1,4-
dihydro-2H-3,1-benzoxazin-2-ones NNRTIs, such as (-)-6-chloro-
4-cyclopropylethynyl-4-trifluoromethyl-1,4-dihydro-2H-3,1-

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benzoxazin-2-one (L-743,726 or DMP-266); or quinoxaline NNRTIs, such as isopropyl (2S)-7-fluoro-3,4-dihydro-2-ethyl-3-oxo-1(2H)-quinoxalinecarboxylate (HBY1293), wherein said additional agent is administered to said patient as either a separate dosage form or as a single dosage form together with said compound.